

Herbin et al., Salamon et al., and Lipman, further in view of Kassab U.S. Patent No. 6,258,200. Claims 21-24 stand finally rejected as being unpatentable over Herbin et al., Salamon et al., and Lipman, further in view of Parish U.S. Patent No. 6,149,750. Applicants respectfully traverse these rejections.

The invention

Applicants' invention is directed to a novel method and apparatus for blocking ophthalmic lenses during edging. The method and apparatus are useful for all lenses, but are particularly useful for blocking lenses having super-hydrophobic anti-reflective (AR) coatings, which are very slippery and do not adhere well to pressure sensitive adhesives. With prior art systems such as the LEAP System that uses a high-density butyl rubber material with an adhesive applied directly to the lens surface, there has been substantial slippage and general inability to properly secure the lens during edge grinding. See, specification, p.1, l.9 to p.2, l.8.

Against the trend of the prior art, applicants' claimed invention places a film having cling properties between the block's adhesive layer and the lens surface, which has unexpectedly been found by the applicants to provide sufficient bonding force between the adhesive layer and the first lens surface to prevent the ophthalmic lens from slipping in the blocks during edging. This intermediate cling film limitation is present in every claim of the application by virtue of its recitation in independent method claims 1 and 8, in independent system claim 12, and in independent apparatus claim 15.

Dependent claims 21-24 recite that the film having cling properties is removed (or is removable) from the first lens surface to leave the first lens surface free of any marks.

The cited prior art

The present invention, as a whole, is not obvious from the combined teachings of the cited prior art.

Herbin et al. U.S. Patent No. 4,826,548

Prior to performing an edging process on an ophthalmic lens, Herbin et al. disclose application of an adhesive layer to be positioned between a block and the lens surface. However, as the Examiner previously acknowledged, the Herbin et al. patent made no mention of the use of a cling film between the adhesive layer and the lens surface. The only protective film applied to the lens surface in Herbin et al. is adhesive tape 9a (Herbin et al., col. 3, ll. 34-37), which is the *adhesive layer itself*. Accordingly, Herbin et al. disclose no additional layer between the adhesive layer on the block, and the lens surface itself. Thus, as the basic reference cited by the Examiner, the Herbin et al. patent fails to teach the need for any film or other layer between the adhesive layer and the lens surface in a lens edging process.

Salamon et al. U.S. Patent No. 5,380,387

Salamon et al. also discloses an adhesive layer applied between the lens surface and the lens block, and an optional "protective coating" of polyvinyl acetate, mixtures of polyvinyl acetate and nitrocellulose resins, and acrylic latexes. (Salamon et al., col. 7, ll. 57-64.) There is no disclosure of whether such "protective coating" is removed, or is even removable, from the lens surface after edging. The Examiner has also previously

acknowledged that Salamon, alone or in combination, fails to teach the use of a cling film as a protective film between the block adhesive and the lens surface.

Lipman U.S. Patent No. 5,451,281

Lipman discloses the use of a LEAP pad and blocking system to edge ophthalmic lenses (col. 2, ll. 7-20) and a protective film "modified to have cling properties" (col. 4, ll. 56-57). However, Lipman specifically and unequivocally teaches away from using applicants' claimed system of providing a cling film between the block's adhesive and the lens surface:

A scratch resistance imparting film is releasably adhered to the side of the lens to which a mounting block is to be attached. An opening is provided in the film, through which the mounting block can be affixed directly to the lens.

(Lipman, Abstract) (emphasis added)

One embodiment of the present invention takes the form of a film having an area greater than the surface of the lens to be protected, the film being provided with an opening approximately the size and shape of the contact area between the mounting block and lens.

(Lipman, col. 2, ll. 55-59) (emphasis added)

The film can be applied either before the LEAP pad and block are applied, since the film is provided with an opening which leaves exposed the area in which the mounting block is affixed to the lens, or the LEAP pad and block can be applied and then the protective film can be applied around the block. The opening can be any size and any shape, but considering the objects of the invention, it will be apparent that the film should cover as much as possible of the lens surface area not covered by the block or LEAP pad.

(Lipman, col. 5, ll. 33-42) (emphasis added)

In the alternative embodiment, as shown in FIGS. 5 and 10, the LEAP pad 8 is superimposed over the opening 2 in the protective film 1, and the unitized film and pad are applied to the lens 7 as at the same time as a single unit. The film could be manufactured as a continuous film with or without perforations for separating individual sheets, with an opening in the

middle of each 4" square sheet, and with a butyl rubber LEAP-type pad superimposed directly over each opening.
(Lipman, col. 5, ll. 53-61) (emphasis added)

The present invention may also take the form of finished lenses ... having a membrane releasably adhered to at least one side thereof, said membrane having an opening of a sufficient perimeter to permit a mounting block to be affixed directly to the lens which is exposed through said opening. The composite lens and membrane may further comprise a two-sided adhesive pad adhered directly to the lens in the area of the opening, so that a lens block can be immediately attached to the lens without unnecessary steps by the operator.
(Lipman, col. 6, ll. 15-28) (emphasis added)

1. A process for imparting scratch resistance to an ophthalmic lens affixed to a block during edging, the process comprising:
providing a lens to be edged, said lens having a front surface and a back surface;
releasably adhering to the front surface of said lens a membrane, said membrane having an opening in the area at which a block is to be affixed to the lens;
affixing a block to the lens through the opening in the membrane.
(Lipman, claim 1)

Thus, Lipman also fails to teach the use of a film having cling properties between the block adhesive and the lens surface.

Argument

Claims 1-4, 6-10, 12, 13, 15-18 and 20-24

The final rejection fails to present *prima facie* grounds for unpatentability of claims 1-4, 6-10, 12, 13, 15-18 and 20-24 because no combination of the cited prior art results in a teaching of the use of a film having cling properties between the block adhesive and the lens surface in a lens edging process or system.

The Examiner has taken the position that "using the evidence within the Lipman document ... clearly suggested that as an alternative to an adhesive coated film one skilled

in the art would have recognized that the use of a cling film would have been a functional equivalent alternate expedient for the protection of the lens surface." O.A., p. 4. However, the use of a cling film as "alternative to an adhesive coated film" would still not arrive at the present claimed invention since it is directed to the use of the cling film in combination with the adhesive on the block, as well as the other claim elements. Applicants do not claim the cling film as an alternative to the adhesive.

The Examiner's stated reasoning for overcoming the plain teaching of Lipman away from using a cling film between the block and the lens surface is that "it is not readily apparent from a reading of the [Lipman] reference why such an opening was provided." O.A., p. 5. Applicant submits that it is in fact readily apparent to one of ordinary skill in the art that the reason that Lipman made an opening in the cling film for the block was that he believed that the method would not work with such a cling film in place. Otherwise, what can explain the fact that Lipman never once describes the use of a cling film between the block and lens surface, and mentions at least seven (7) times in the patent that an opening is provided so that the cling film is not present between the block and the lens surface? The Examiner's contrary position that "[o]ne skilled in the art would have understood that the blocking operation would have worked whether there was a protective film over the area where the block was joined to the lens with adhesive or not" (O.A., p. 5), is nowhere supported by the disclosure and teachings of Lipman.

An invention may not be deemed obvious if it fails to consider a reference in its entirety and ignores portions that teach away from the invention. *Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc.*, 796 F.2d 443, 230 USPQ 416, 420 (Fed. Cir. 1986). See

also, *Tec Air Inc. v. Denso Mfg. Michigan Inc.*, 192 F.3d 1353, 52 USPQ2d 1294, 1298 (Fed. Cir. 1999) ("There is no suggestion to combine, however, if a reference teaches away from its combination with another source.") Since Lipman himself teaches away from utilizing a cling film between the block adhesive and the lens surface and, instead, applies the block and adhesive to the lens through an opening in the cling film, the combination with Lipman fails to render obvious the present claimed method and system.

The Examiner has taken the position that Herbin and Salamon both suggested the combination with Lipman. However, in order to combine Herbin et al. and Salamon et al. with Lipman, which teaches away from using a cling film between the block adhesive and the lens surface, there would have to be some different motivation taught in one of the references. *Winner International Royalty Corp. v. Wang*, 202 F.3d 1340, 53 USPQ2d 1580, 1587 (Fed. Cir. 2000) ("Trade offs often concern what is feasible, not what is, on balance, desirable. Motivation to combine requires the latter.") The fact that Lipman may disclose that his polyethylene film may be modified to have cling properties or provided with an adhesive does not overcome his teaching that neither one should be used between the block adhesive and the lens surface. There is simply no teaching or motivation in Herbin or Salamon for one of ordinary skill in the art to disregard Lipman's teaching to combine it with the other cited references in the manner proposed to arrive at the present claimed invention.

Thus the present invention as defined by applicants' claims 1-4, 6-10, 12, 13, 15-18 and 20-24 is not *prima facie* obvious since the hypothetical combination of elements,

chosen as a result of the hindsight benefit of reading appellants' own specification, does not arrive at the present claimed invention.

Claims 5, 11, 14 and 19

The Kassab patent, cited to reject dependent claims 5, 11, 14 and 19, does not correct the deficiencies of the other three references, Herbin, Salamon and Lipman. Kassab says nothing about use of a static-cling film with ophthalmic lenses, let alone use in a blocking system for edging ophthalmic lenses.

Claims 21-24

In combination with Herbin, Salamon and Lipman, the Examiner has cited the Parrish patent for its disclosure that the adhesives described therein leave virtually no adhesive residue when removed from the lens. However, as with the Herbin reference, the "protective layer" as cited by the examiner is merely the adhesive used on the block to adhere to the lens surface. Parrish does not disclose any additional layer between the block's adhesive and the lens surface, let alone a film having cling properties. Thus, Parrish does not overcome the deficiencies of the other reference, and does not create a case of *prima facie* obviousness.

Conclusion

The cited references do not render the claimed invention obvious since they do not address or even recognize the problem discovered by applicants, namely, the problem of blocking ophthalmic lenses with slippery coatings, or the unexpected advantages from the use of the cling film intermediary. As summarized in the instant application:

Contrary to accepted thought, the present invention provides better blocking properties by eliminating the application of the adhesive layer to the surface

of the ophthalmic lens. It is particularly useful for blocking lenses having slippery coatings thereon, and provides a high degree of bonding, yet is easily removed and does not damage the lens surface.
(Specification, p.6, ll. 16-20)

It is respectfully submitted that the application is in condition where allowance of the entire case is proper. Reconsideration and issuance of a notice of allowance are respectfully solicited. Should the Examiner not find the claims to be allowable, applicants' attorney respectfully requests that the Examiner call the undersigned to clarify any issue and/or to place the case in condition for allowance.

Respectfully submitted,



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